

IN THE CLAIMS:

In line 1, delete ~~Patent Claims~~ and insert:

C L A I M S

What is claimed is:

Please cancel claim 16 and amend claims 1-15 and 17-20 to read as follows:

1. (Currently Amended) A In a method for manufacturing a ~~thermoplastic~~ plastic synthetic board comprising at least one smooth side edge, through said method comprising the steps of:

- mixing a thermoplastic synthetic in an extruder;
- pressing the synthetic through a wide-slot nozzle to form a flat synthetic web (20);
- cooling and calibrating of the synthetic web (20) on a calendar roll pair; and
- drawing off the synthetic web (20);

~~characterized in that~~ the improvement wherein the side edge (21) of the synthetic web (20) is heated to at least a melting temperature of the synthetic following calibration, while ~~the~~ adjacent peripheral surface ~~zones (22, 23) areas~~

are kept at a temperature below the softening temperature by cooling.

2. (Currently Amended) A method as set forth in claim 1, ~~characterized in that~~ wherein the thermoplastic synthetic is hard PVC.

3. (Currently Amended) A method as set forth in claim 1, wherein ~~or 2, characterized in that~~ the synthetic board is an integral foam board.

4. (Currently Amended) A method as set forth in ~~one of the claims 1 to 3,~~ characterized in that claim 1, wherein the longitudinal sides of the synthetic web (20) are trimmed prior to heating ~~of~~ the side edges.

5. (Currently Amended) A smoothing device ~~(10, 10')~~ for a side edge ~~(21, 24)~~ of a ~~thermoplastic~~ plastic synthetic board (20), with a guiding groove ~~(14, 14')~~ with at least one heating means ~~(15, 15')~~ in the a face area ~~(11, 11')~~, each with at least one cooling means ~~(16, 17, 16', 17')~~ at the side areas ~~(12, 13, 12', 13')~~ located on opposite sides,

where a thermoplastic synthetic board (20), which can be guided in a guiding groove (14, 14'), rests with its cutting edge (21, 24) against the face zone (11, 11') and with its peripheral surface zones (22, 23) against the side areas (12, 13, 12', 13').

6. (Currently Amended) A smoothing device (10) as set forth in claim 5, ~~characterized in that~~ wherein at least one thermal insulating layer is provided between each of the heating and cooling means (15, 16, 17).

7. (Currently Amended) A smoothing device (10) as set forth in claim 6, ~~characterized in that~~ wherein at least one insulation zone formed by a groove or a borehole (18.1, ..., 18.5), which stretches across a major portion of the smoothing device (10), is located between a cross-sectional zone with a heating means (15) ~~located in it~~ and at least one cross-sectional zone ~~in which~~ with a cooling means (16, 17) ~~is located~~.

8. (Currently Amended) A smoothing device (10') as set forth in ~~one of the claims 5 to 7, characterized in that~~

claim 5, wherein the heating means is formed by at least one heating channel ~~(15<sup>1</sup>)~~ in which a heated liquid is flowing.

9. (Currently Amended) A smoothing device ~~(10)~~ as set forth in ~~one of the claims 5 to 7, characterized in that~~ claim 5, wherein the heating means is formed by at least one electrical heating cartridge ~~(15)~~.

10. (Currently Amended) A smoothing device ~~(10, 10<sup>1</sup>)~~ as set forth in ~~one of the claims 5 to 9, characterized in that~~ claim 5, wherein the heating means ~~(15, 15<sup>1</sup>)~~ stretches across 0.4 to 0.6 times the length of the smoothing device.

11. (Currently Amended) A smoothing device ~~(10, 10<sup>1</sup>)~~ as set forth in ~~one of the claims 5 to 10, characterized in that~~ claim 5, wherein the cooling means is created by at least one cooling channel ~~(16, 17, 16<sup>1</sup>, 17<sup>1</sup>)~~, which has a cooling liquid flowing through it.

12. (Currently Amended) A smoothing device ~~(10, 10<sup>1</sup>)~~ as set forth in claim 10, ~~characterized in that~~ wherein the cooling

channels ~~(16, 17, 16', 17')~~ are fed by a common cooling liquid lead line.

13. (Currently Amended) A smoothing device ~~(10, 10')~~ as set forth in ~~one of the claims 5 to 11, characterized in that~~ claim 5, wherein at least one of the side areas ~~(12, 13, 12', 13')~~ of the guiding groove ~~(14, 14')~~ exhibits an inlet slant ~~(14.1)~~ towards the outside of the device.

14. (Currently Amended) A smoothing device ~~(10)~~ as set forth in ~~one of the claims 5 to 12, characterized in that~~ claim 5, wherein the smoothing device is supported in a spring-loaded ~~fashion~~ manner and is movable perpendicular to the face area ~~(11)~~.

15. (Currently Amended) An edge machining system ~~(100)~~ for a side edge ~~(21, 24)~~ of a ~~thermoplastic~~ plastic synthetic board ~~(20)~~, comprising of at least one smoothing device ~~(10)~~ as set forth in ~~one of the claims 5 to 14~~ claim 5, and a guiding device, said system comprising, at least in combination:

- ~~one~~ a movable carriage for receiving at least one synthetic board ~~(20)~~;
- at least one securing means ~~(35)~~ for securing the synthetic board ~~(20)~~ on the carriage; and
- ~~one~~ a drive device (32, 33, 34) for moving the carriage in relation to the smoothing device (10).

16. (Canceled).

17. (Currently Amended) An edge machining system ~~(100,~~  
~~100<sup>1</sup>)~~ as set forth in claim 15, wherein ~~or 16,~~ characterized  
~~in that~~ at least two smoothing devices ~~(10)~~ are provided,  
 which are ~~located symmetrical~~ arranged symmetrically to one  
 another with regard to the direction of movement ~~(2)~~.

18. (Currently Amended) An edge machining system as set  
 forth in claim 15, ~~characterized by~~ further comprising a  
 rotation device with which the synthetic board can be  
 rotated relative to the carriage.

19. (Currently Amended) An edge machining system as set  
 forth in claim 16, further comprising ~~or 17,~~ characterized

by a rotation device with which the smoothing device can be rotated relative to the synthetic board.

20. (Currently Amended) An edge machining system as set forth in ~~one of the claims 15 to 19, characterized in that~~ claim 15, wherein the distance of the smoothing device to a symmetric axis of the synthetic board is adjustable.